

Claims

- [c1] 1. A device for retaining a mercury source in the discharge space of a low-pressure discharge lamp, comprising
a holder comprising an inner space communicating with the discharge space,
the holder further comprising a receiver opening for receiving a mercury source,
resilient clamping means for clamping the holder in a tubular space segment of the discharge space,
resilient retaining means at least partially blocking the receiver opening, the retaining means adapted for allowing a passage of the mercury source in a direction towards the inner space of the holder, and blocking the movement of the mercury source through the receiver opening in a direction out of the holder.
- [c2] 2. The device of claim 1 in which the holder is made of a double coil, the ends of the coil being turned towards a central axis of the coil and acting as the retaining means.
- [c3] 3. The device of claim 1 in which the holder is made of a sheet material formed in an essentially cylindrical shape.
- [c4] 4. The device of claim 3 in which the cylindrical holder comprises cylinder segments, the cylinder segments are separated with slits extending substantially parallel with a central axis of the cylinder.
- [c5] 5. The device of claim 4 in which the clamping means is constituted by cylinder segments tilting radially outward.
- [c6] 6. The device of claim 4 in which the retaining means is constituted by ends of cylinder segments folding radially inward.
- [c7] 7. The device of claim 4 in which the holder is formed as a substantially frusto-conical barrel with a longitudinal slit formed substantially along a generatrix of the barrel, and the retaining means are formed as tongues extending radially inwards from an edge of the barrel.
- [c8] 8. The device of claim 1 in which a material of the device is selected from the

group containing stainless steel, molybdenum, tungsten or nickel.

- [c9] 9. A method for retaining a mercury source at a predetermined location in a discharge space of a low-pressure discharge lamp, comprising the steps of inserting a retaining device into the discharge space, the retaining device comprising
- a holder comprising an inner space communicating with the discharge space and a receiver opening for receiving a mercury source,
- resilient clamping means for clamping the holder in a tubular space segment of the discharge space,
- resilient retaining means at least partially blocking the receiver opening, the retaining means adapted for allowing a passage of the mercury source in a direction towards the inner space of the holder, and blocking the movement of the mercury source through the receiver opening in a direction out of the holder;
- clamping the retaining device at the predetermined location;
- inserting the mercury source into the holder through the receiver opening and past the retaining means.
- [c10] 10. The method of claim 9 in which the retaining device is inserted in the discharge space before evacuating the discharge space.
- [c11] 11. The method of claim 9 in which the retaining device is pushed into an end of an exhaust tube, in a position where the receiver opening of the retaining device turns towards an outer end of the exhaust tube.
- [c12] 12. The method of claim 9 in which the mercury source is inserted in the holder of the retaining device after evacuating the discharge space.
- [c13] 13. The method of claim 11 in which the mercury source is pushed through the receiver opening with a pushing rod.
- [c14] 14. The method of claim 11, in which the discharge space is filled with a filling gas, and the mercury source is blown through the receiver opening with the filling gas.

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- [c15] 15. The method of claim 11 in which the evacuated discharge space is sealed after inserting the mercury source.
- [c16] 16. A low-pressure discharge lamp comprising a discharge space, a discharge electrode and a mercury source located in a predetermined location of the discharge space, in which the mercury source is retained in a retaining device, the retaining device comprising
a holder comprising an inner space communicating with the discharge space and a receiver opening for receiving a mercury source,
resilient clamping means for clamping the holder in a tubular space segment of the discharge space,
resilient retaining means at least partially blocking the receiver opening, the retaining means adapted for allowing a passage of the mercury source in a direction towards the inner space of the holder, and blocking the movement of the mercury source through the receiver opening in a direction out of the holder.
- [c17] 17. The discharge lamp of claim 16 in which the retaining device is located in an end of an exhaust tube.
- [c18] 18. The discharge lamp of claim 16 in which the exhaust tube connects to a stem supporting the discharge electrode.
- [c19] 19. The discharge lamp of claim 16 in which the mercury source is an amalgam.
- [c20] 20. The discharge lamp of claim 16 in which the mercury source is a pellet containing liquid mercury.